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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MCGINN & GIBB, PLLC
8321 OLD COURTHOUSE ROAD
SUITE 200
VIENNA, VA 22182-3817

EXAMINER

VU, HUNG K

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/756,177

Applicant(s)

GAMBINO ET AL.

Examiner

Hung K. Vu

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-49 is/are pending in the application.
- 4a) Of the above claim(s) 12-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 1/2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2811

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Invention of Group I, Claims 5-11, in Paper No. 6 is acknowledged.

Claims 12-49 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Invention, there being no allowable generic or linking claim.

Election was made **without** traverse in Paper No. 6.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 5-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 respectively, of U.S. Patent No. 6,252,271.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 5-11 are generic to claims 1-6 of U.S. Patent No. 6,252,271. The claimed invention (claims 5-11) of the present application is a mere broader version of the claimed invention (claims 1-6) of the above identified U.S. Patent with similar intended scope, thus allowing unjustified or improper timewise extension of the "right to exclude" granted by a U.S. Patent No. 6,252,271.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2811

Claims 5 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamazaki et al. (PN 5,633,519, of record).

Yamazaki et al. discloses, as shown in Figures 1(A)-1(B) and 3(E), a memory comprising,

a gate conductor (104) having first and second sides, the first side having a slope and the second side having a substantially vertical wall;

at least one floating gate (103) formed of the polysilicon spacer material [Col. 9, lines 1-3] and formed on the second side of the gate conductor such that the gate conductor surrounds the at least one floating gate on a plurality of sides.

Note that the term “prior to deposition” is method recitation in a device claimed. Note that only the final product is relevant, not the method of making. A product by process claim is directed to the product per se, no matter how actually made. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not.

With regard to claims 8 and 11, Yamazaki et al. discloses the gate conductor surrounds the at least one floating gate on at least two sides [see Figures 1(B)].

With regard to claim 9, Yamazaki et al. discloses the gate conductor surrounds the at least one floating gate on three sides [see Figures 1(B)].

With regard to claim 10, Yamazaki et al. discloses the at least one floating gate is self-isolated from an adjacent floating gate by the gate conductor [see Figures 1(B)].

Art Unit: 2811

5. Claims 5 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Yang (PN 5,258,634, of record).

Yang discloses, as shown in Figures 5C-8, a memory comprising,

a gate conductor (24) having first and second sides, the first side having a slope (vertical) and the second side having a substantially vertical wall;

at least one floating gate (17) formed of the polysilicon spacer material [Col. 2, lines 52-54] and formed on the second side of the gate conductor such that the gate conductor surrounds the at least one floating gate on a plurality of sides.

Note that the term “prior to deposition” is method recitation in a device claimed. Note that only the final product is relevant, not the method of making. A product by process claim is directed to the product per se, no matter how actually made. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not.

With regard to claims 8 and 11, Yang discloses the gate conductor surrounds the at least one floating gate on at least two sides [see Figures 5C-8].

With regard to claim 9, Yang discloses the gate conductor surrounds the at least one floating gate on three sides [see Figures 5C-8].

With regard to claim 10, Yang discloses the at least one floating gate is self-isolated from an adjacent floating gate by the gate conductor [see Figures 5C-8].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. (PN 5,633,519, of record) in view of Wake (PN 5,338,953).

Yamazaki et al. discloses the invention as claimed, including the memory as cited in the rejections of claim 5. Yamazaki et al. further discloses the gate conductor is formed on a silicon substrate (no label, or 301,401), and adjacent ones of the at least one floating gate are isolated from each other and the second sidewall includes regions provided between the adjacent ones of the at least one floating gate. Yamazaki et al. does not disclose regions are tapered. However, Wake discloses a second sidewall of a gate conductor (7) having tapered regions provided between the adjacent ones of the at least one floating gate (5). Note Figures 3 and 18 of Wake. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the second sidewall of Yamazaki et al. having tapered regions, such as taught by in order to reduce the mask processes.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yang (PN 5,258,634, of record) in view of Wake (PN 5,338,953).

Art Unit: 2811

Yang discloses the invention as claimed, including the memory as cited in the rejections of claim 5. Yang further discloses the gate conductor is formed on a silicon substrate (10), and adjacent ones of the at least one floating gate are isolated from each other and the second sidewall includes regions provided between the adjacent ones of the at least one floating gate. Yang does not disclose regions are tapered. However, Wake discloses a second sidewall of a gate conductor (7) having tapered regions provided between the adjacent ones of the at least one floating gate (5). Note Figures 3 and 18 of Wake. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the second sidewall of Yang having tapered regions, such as taught by in order to reduce the mask processes.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. (PN 5,633,519, of record).

Yamazaki et al. discloses the invention as claimed, including the memory as cited in the rejections of claim 5. Yamazaki et al. further discloses the gate conductor surrounds the at least one floating gate on the plurality of sides. Yamazaki et al. does not disclose the gate conductor surrounds the at least one floating gate on only two sides. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form gate conductor of Yamazaki et al. surrounding on only two sides in order to simplify the process steps and to have a desired pattern.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yang (PN 5,258,634, of record).

Art Unit: 2811

Yang discloses the invention as claimed, including the memory as cited in the rejections of claim

5. Yang further discloses the gate conductor surrounds the at least one floating gate on the plurality of sides. Yang does not disclose the gate conductor surrounds the at least one floating gate on only two sides. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form gate conductor of Yang surrounding on only two sides in order to simplify the process steps and to have a desired pattern.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung K. Vu whose telephone number is (703) 308-4079. The examiner can normally be reached on Mon-Thurs 7:00-4:30, alternate Friday 7:00-3:30, Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (703) 308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Vu

June 12, 2003

Hung K. Vu